

### **REMARKS**

The claims have not been amended. Claims 4-6 and 10-22 have been previously withdrawn from further consideration, and claim 2 was previously canceled. Accordingly, claims 1, 3, and 7-9 are currently pending in the application, of which claim 1 is independent.

In view of the following Remarks, Applicant requests reconsideration and timely withdrawal of the pending rejections for at least the reasons discussed below.

Further, the examiner's attention is respectfully directed to the rebuttal beginning on page 11.

#### ***Interview Summary***

Applicant thanks the Examiner for the courtesies extended during the interview of January 10, 2008. During the interview, Applicant's representative and the examiner discussed the applicability of case law, including In re Dailey, 149 USPQ 47 and In re Seid, 73 USPQ 431, which were cited at pages 5-6 of the Office Action and relied upon by the examiner in rejecting the claims. No agreement was reached.

#### ***Rejections Under 35 U.S.C. § 103***

Claims 1, 3, and 7-8 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Japanese Patent Application Publication No. 10-214614 filed by Inoue ("Inoue"). Claim 1 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Chinese Patent Application Publication No. 2473755 ("CN '755").

Applicant respectfully traverses these rejections for at least the reasons asserted in the Reply filed on September 5, 2007, which reasons are reasserted below.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 550 U.S. \_\_\_, slip op. at 14-15 (2007). Thus, even if the prior art may be combined, the references when combined must disclose or suggest all of the claim limitations. See *in re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 1 recites, *inter alia*:

wherein the negative electrode lead comprises a planar portion electrically coupled to the negative electrode plate and a curved portion arranged out of plane from the planar portion, the curved portion having the same width as the planar portion, and the current interrupter is arranged in the curved portion of the negative electrode lead, and

wherein the current interrupter has a cross-sectional area that is smaller than a cross-sectional area of an adjacent portion of the planar portion. (emphasis added)

The examiner concurs that both Inoue and CN '755 fail to disclose at least these features. Specifically, the examiner states that Inoue and CN '755 fail to disclose "the specified curved portion out of plane from a planar section." See Office Action, page 5, 6. To remedy the shortcomings of these references, the examiner then cites to In re Dailey, 149 USPQ 47 in support of the proposition that "changes in shape is [sic] a matter of choice ... absent persuasive evidence that the particular configuration of the claimed electrode lead is significant

or critical." Office Action, page 5, 6 (emphasis added). The examiner also cites to In re Seid, 73 USPQ 431 in support of the proposition that "aesthetic design changes having no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art." Office Action, page 5, 6 (emphasis added).

Thus, in order to remedy the shortcomings of Inoue and CN '755, the examiner concludes that the curved portion and arrangement of the current interrupter in the curved portion is "a matter of choice" and therefore elects not to cite to any cited references for this feature.

However, the shape of a product may be of patentable significance where "it results in a product which is distinct" over the prior art. MPEP, Section 2144.04 (citing to Ex parte Hilton, 148 USPQ 356 (Bd. App. 1965)). Read together, Hilton, Dailey, and Seid stand for the proposition that shape and/or configuration changes that are more than just aesthetic, and provide some mechanical function, may render a claimed invention patentable over prior art.

This proposition, as applied to the present invention recited in claim 1, supports the patentability of claim 1 over the cited references. Specifically, the arrangement of the current interrupter in the curved portion of the negative electrode lead offers mechanical advantages over the cited references. Further, these mechanical advantages are not disclosed in the cited references.

Such mechanical advantages were described in the Declaration Under 37 CFR § 1.132 submitted concurrently with the Reply filed on September 5, 2007. Specifically, in paragraph 14 of the Declaration, Applicant declared that "in the case of over-current, the arrangement of the reduced cross-section current interrupter 36a in the higher-stress curved portion of the negative electrode lead 36 would best ensure 'a disconnection' at the current interrupter 36a." Further, in paragraph 15, Applicant declared that:

Heat generation increases electrical resistance through the current interrupter, and also mechanically weakens the current interrupter. Because the current interrupter has a smaller cross-section than the negative electrode lead, and has a greater mechanical stress as a result of the eccentric loading, mechanical weakening of the current interrupter due to the generated heat causes the current interrupter to break or disconnect from the negative electrode lead quickly to avoid an explosion from thermal runaway.

In the Office Action, the examiner asserted that the “apparent mechanical advantages ... are completely expectable when a change in shape or configuration does occur.” Office Action, pages 9-10. However, it is not merely the inclusion of a curved portion in a negative electrode lead, but the arrangement of the current interrupter in the curved portion, thus improving the operation of the current interrupter, that distinguishes the present invention from the cited references.

Further, in the Office Action, the examiner submits that the inclusion of a curved portion is an effect-result scenario, whereby the concentrated stress at a particular location is an expected result of the eccentric axial loading. Office Action, page 10. However, the examiner offers no support that arranging a current interrupter in a location having a concentrated and mechanically-applied stress would be of any particular advantage in the operation of the current interrupter. Absent this support, the pending rejections cannot be maintained.

In view of these advantages, neither Dailey nor Seid are relevant to remedy the shortcomings of Inoue and CN '755 with respect to claim 1. Accordingly, since claim 1 is not anticipated by Inoue and CN '755, and since the examiner has failed to remedy the shortcomings of these cited references, claim 1 is allowable over these references.

Moreover, claims 3 and 7-9 depend from allowable claim 1, and are allowable for at least this reason.

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Inoue and/or CN '755, and further in view of U.S. Patent Application Publication No.

2005/0171383, applied for by Arai, *et al.* ("Arai"). Applicant respectfully traverses this rejection for at least the following reasons.

Applicant respectfully submits that claim 1 is allowable over Inoue and/or CN '755, and Arai fails to cure the deficiencies of Inoue and/or CN '755 noted above with regard to claim 1. Hence, claim 9 is allowable at least because it depends from an allowable claim 1.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 1. Claims 3 and 7-9 depend from claim 1 and are allowable at least for this reason. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicant respectfully submits that independent claim 1, and all the claims that depend therefrom, are allowable.

***Rebuttal to Examiner's Response to Arguments***

In the Office Action, the examiner "contends that TO BE OF PROBATIVE VALUE, ANY OBJECTIVE EVIDENCE SHOULD BE SUPPORTED BY ACTUAL PROOF." Office Action, page 8 (citing to MPEP 716.01(c)) (emphasis in original). The examiner then further explicates his reliance upon MPEP 716.01(c) by quoting that "[o]bjective evidence which must be factually supported by an appropriate affidavit or declaration to be of probative value includes evidence of unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the author(s) of the prior art derived the disclosed subject matter from the applicant." *Id.* (citing to, *inter alia*, In re De Blauwe).

The examiner's reliance on MPEP 716.01(c) is misplaced. If the examiner were to read the parenthetical citation after In re De Blauwe, he would see that the above-quoted sentence from MPEP 716.01(c) finds its basis in the Federal Circuit's statement that "[i]t is well settled

that unexpected results must be established by factual evidence.” In re De Blauwe, 736 F.2d 699, 705 (Fed. Cir. 1984). To properly put the cart before the horse, Applicant will first restate the quotation from MPEP 716.01(c) to show why it is not relevant in this situation: “evidence of unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the author(s) of the prior art derived the disclosed subject matter from the applicant” is objective evidence that “must be factually supported by an appropriate affidavit or declaration to be of probative value.”

However, with the Declaration, Applicant is not seeking to prove “unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, [or] allegations that the author(s) of the prior art derived the disclosed subject matter from the applicant.” Rather, Applicant establishes by the Declaration that the reasoning of Dailey and Seid are not applicable since there is a “significant or critical” reason for arranging the negative electrode lead as claimed. Because the “significant or critical” reason for a claimed arrangement is not listed among MPEP 716.01(c) as the type of declaration that requires “objective evidence,” the examiner’s reliance on this section of the MPEP is, simply put, misplaced.

Further, since the reasoning of Dailey and Seid are not applicable to this case, the curved portion of the negative electrode lead cannot be simply pooh-poohed away as a “matter of choice.” Rather, it must be treated as any other element to be addressed. As noted above, even if the prior art may be combined, the references when combined must disclose or suggest all of the claim limitations. See *in re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). By the current rejections, which fail to disclose or suggest at least the “curved portion” of claim 1, the references when combined do not “disclose or suggest all of the claim limitations” by the examiner’s own admission.

Accordingly, since claim 1 is not anticipated by Inoue and CN '755, and since the examiner has failed to remedy the shortcomings of these cited references, claim 1 and all the claims that depend therefrom are allowable over these references.

**CONCLUSION**

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

/hae-chan park/

Hae-Chan Park  
Reg. No. 50,114

Date: January 10, 2008

**CUSTOMER NUMBER: 58027**

H.C. Park & Associates, PLC  
8500 Leesburg Pike  
Suite 7500  
Vienna, VA 22182  
Tel: 703-288-5105  
Fax: 703-288-5139  
HCP/WMH/mro